Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A non-contact optoelectronic system for an automatic vehicle door closure to detect the presence of an obstruction, the system comprising:

at least one transmitter for emitting an electromagnetic energy signal;

at least one sensor for detecting the electromagnetic energy signal emitted by the at least one transmitter;

a control module in communication with the at least one transmitter and at least one sensor for monitoring and processing ~~the~~ signal interrupts detected by the at least one sensor to detect an obstruction between the at least one transmitter and at least one sensor, wherein the control module generates a motor control signal to stop and reverse a vehicle door upon detection of an obstruction between the at least one transmitter and at least one sensor.

2. (Currently Amended) The optoelectronic system of claim 1 wherein the control module processes the ~~electromagnetic energy~~ signal interrupts from the at least one sensor by comparing the signal interrupts against stored values to determine whether an obstruction is present in an entry area of the vehicle.

3. (Currently Amended) The optoelectronic system of claim 1 wherein ~~the~~ an entry area of the vehicle is defined by a passage in a vehicle body, a door jamb defining an outer periphery of the passage and a vehicle door selectively positionable between an open position and a closed position adjacent the passage of the vehicle.

4. (Original) The optoelectronic system of claim 1 wherein the at least one transmitter further comprises a pair of transmitters disposed on an inner surface of the vehicle door.

5. (Currently Amended) The optoelectronic system of claim 1 wherein the at least one sensor further comprises a single sensor disposed on an inner surface of ~~the~~ a door jamb.

6. (Currently Amended) The optoelectronic system of claim 1 wherein the at least one sensor further comprises a plurality of sensors disposed on ~~the~~ an inner surface of the door jamb.

7. (Original) The optoelectronic system of claim 6 wherein the plurality of sensors are arranged as an array on the inner surface of the door jamb to detect signals transmitted by the at least one transmitter.

8. (Currently Amended) The optoelectronic system of claim 1 further comprising a first reflective surface disposed on ~~the~~ an inner surface of the vehicle door and a second reflective surface disposed on the inner surface of the door jamb to reflect the emitted signal from the at least one transmitter to the at least one sensor.

9. (Original) The optoelectronic system of claim 8 wherein the first and second reflective surfaces comprise a reflective coating applied to the inner surfaces of the vehicle door and door jamb.

10. (Original) The optoelectronic system of claim 8 wherein the first and second reflective surfaces comprise a polished metal surface disposed on the inner surfaces of the vehicle door and door jamb.

11. (Original) The optoelectronic system of claim 1 wherein the electromagnetic energy signal emitted by the at least one transmitter is infrared light.

12. (Currently Amended) An automatic vehicle door closure system comprising:

an entry area for a vehicle, the entry area defined by a passage in a vehicle body, a door jamb defining an outer periphery of the passage and a vehicle door selectively positionable between an open position and a closed position adjacent the passage of the vehicle;

a drive motor operatively connected to the motor for selectively positioning the vehicle door between an open and closed position;

at least one transmitter for emitting an electromagnetic energy signal into the entry area of the vehicle;

at least one sensor for detecting the electromagnetic energy signal emitted by the at least one transmitter in the entry area of the vehicle;

a control module in communication with the at least one transmitter and at least one sensor for monitoring and processing ~~the~~ signal interrupts detected by the at least one sensor to sense an obstruction in the entry area of the vehicle during the closing of the vehicle door, wherein the control module generates and sends a motor control signal to the drive motor to stop and open the vehicle door upon detection of an obstruction between the at least one transmitter and at least one sensor in the entry area of the vehicle.

13. (Currently Amended) The vehicle door closure system of claim 12 wherein the control module compares the signal interrupts detected by the at least one sensor against stored values to determine whether an obstruction is present in the entry area of the vehicle.

14. (Original) The vehicle door closure system of claim 12 wherein the control module activates the at least one transmitter and at least one sensor upon receiving a signal from a switching mechanism to operate drive motor to close the vehicle door.

15. (Original) The vehicle door closure system of claim 12 wherein the at least one transmitter further comprises a pair of transmitters disposed on an inner surface of the vehicle door.

16. (Original) The vehicle door closure system of claim 12 wherein the at least one sensor further comprises a plurality of sensors disposed on the inner surface of the door jamb.

17. (Original) The vehicle door closure system of claim 16 wherein the plurality of sensors are arranged as an array on the inner surface of the door jamb to detect signals transmitted by the at least one transmitter.

18. (Original) The vehicle door closure system of claim 12 wherein the electromagnetic energy signal emitted by the at least one transmitter is infrared light.

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19. (Currently Amended) A method of detecting an obstruction in an automatic vehicle door closure, the method comprising the steps of:

providing a non-contact optoelectronic system for detecting the presence of an obstruction during the closing of the vehicle door, the non-contact optoelectronic system including at least one transmitter disposed on an inner surface of a vehicle door, at least one sensor disposed on an inner surface of a door jamb and a control module in communication with the non-contact optoelectronic system;

activating the at least one transmitter and at least one sensor when the control module initiates ~~the~~ forward travel of the automatic vehicle door;

emitting an electromagnetic energy interrupt signal from the at least one transmitter;

detecting the electromagnetic energy interrupt signal emitted from the at least one transmitter with the at least one sensor;

monitoring ~~the~~ electromagnetic energy signal interrupts detected by the at least one sensor with the control module for the presence of obstructions between the inner surface of the vehicle door and the inner surface of the door jamb; and

processing a signal from the control module to a drive motor operatively connected to the vehicle door to terminate the closing of the door based upon detection of an obstruction between the vehicle door and door jamb.

20. (Original) The method of claim 19 further comprising the step of comparing the electromagnetic energy signal interrupts detected by the at least one sensor to stored values in the control module to detect the presence of an obstruction between the vehicle door and door jamb.

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21. (Original) The method of claim 19 wherein the step of emitting an interrupt signal from the at least one transmitter further comprises emitting an infrared light signal from the at least one transmitter.

22. (Original) The method of claim 19 further comprising the step of performing a hardware fault detection of the obstruction detection during the opening of the automatic vehicle door.

23. (Original) The method of claim 22 wherein the step of performing a hardware fault detection of the non-contact optoelectronic system further comprises sending a pulse of infrared light from the at least one transmitter to the at least one sensor to test the optoelectronic system.